

WHAT IS CLAIMED IS:

1. A plasma display device comprising:
a plurality of first electrodes;
a plurality of second electrodes disposed nearly in parallel with said plurality of first electrodes so as to configure a display cell together therewith, and so as to activate electric discharge between themselves and said first electrode composing said display cell;

a first electrode drive circuit for applying discharge voltage to said plurality of first electrodes; and

a second electrode drive circuit for applying discharge voltage to said plurality of second electrodes; wherein

at least either one of said first and second electrode drive circuits comprises a parallel circuit in which a first switching element having a high-speed switching performance and a second switching element having a low-saturation-voltage performance are connected in parallel.

2. The plasma display device according to claim 1, wherein said first switching element is a power MOSFET.

3. The plasma display device according to claim 1, wherein said second switching element is an IGBT.

4. The plasma display device according to claim 1, wherein said first switching element is a power MOSFET, and said second switching element is an IGBT.

5. The plasma display device according to claim 1, wherein said second switching element is turned on at least during a period that discharge current flows between said first electrodes and said second electrodes.

6. The plasma display device according to claim 5, wherein said first switching element is a power MOSFET.

7. The plasma display device according to claim 5, wherein said second switching element is an IGBT.

8. The plasma display device according to claim 5, wherein said first switching element is a power MOSFET, and said second switching element is an IGBT.

9. The plasma display device according to claim 1, wherein said electrode drive circuit further comprises a sustain circuit for outputting sustain discharge voltage for activating electric discharge associated with light emission in said display cell,

said sustain circuit comprises a parallel circuit in which said first switching element and said second switching element are connected in parallel.

10. The plasma display device according to claim 9, wherein said first switching element is a power MOSFET.

11. The plasma display device according to claim 9, wherein said second switching element is an IGBT.

12. The plasma display device according to claim 9, wherein said first switching element is a power MOSFET, and said second switching element is an IGBT.

13. The plasma display device according to claim 9, wherein said sustain circuit further comprises a higher-potential-side switching circuit for supplying a first potential in relation to said sustain discharge voltage to said electrodes configuring said display cell, and a lower-potential-side switching circuit for supplying a second potential in relation to said sustain discharge voltage,

lower than said first potential;

said higher-potential-side switching circuit and said lower-potential-side switching circuit respectively having said parallel circuit in which said first switching element and said second switching element are connected in parallel.

14. The plasma display device according to claim 13, wherein said first switching element is a power MOSFET.

15. The plasma display device according to claim 13, wherein said second switching element is an IGBT.

16. The plasma display device according to claim 13, wherein said first switching element is a power MOSFET, and said second switching element is an IGBT.

17. The plasma display device according to claim 13, wherein said electrode drive circuit further comprises a power recovery circuit connected to said electrode configuring said display cell.

18. The plasma display device according to claim 13, wherein said electrode drive circuit further comprises a power recovery switch connected via a coil to said electrode configuring said display cell.

19. The plasma display device according to claim 18, wherein said second switching element is turned on at least during a period that discharge current flows between said first electrodes and said second electrodes.

20. The plasma display device according to claim 18, wherein said first switching element is a power MOSFET.

21. The plasma display device according to claim 18, wherein said second switching element is an IGBT.

22. The plasma display device according to claim 18, wherein said first switching element is a power MOSFET, and said second switching element is an IGBT.

23. The plasma display device according to claim 1, wherein said first switching element and said second switching element almost coincide with each other in their input threshold voltage characteristics.

24. The plasma display device according to claim 1, wherein said first switching element and said second switching element are driven based on the same drive signal.

25. The plasma display device according to claim 1, wherein a switching time of said first switching element is shorter than that of said second switching element.

26. The plasma display device according to claim 13, wherein said higher-potential-side switching circuit is configured so as to supply a positive potential in relation to said sustain discharge voltage to the electrode configuring said display cell, and said lower-potential-side switching circuit is configured so as to supply a negative potential in relation to said sustain discharge voltage to the electrode configuring said display cell.

27. The plasma display device according to claim 26, wherein said positive potential represents a voltage which equals to a half of said sustain discharge voltage above the ground level, and said negative potential represents a voltage which equals to a half of said sustain discharge voltage below the ground level.

28. The plasma display device according to claim 26, wherein said electrode drive circuit further comprises a power

recovery circuit connected to said electrode configuring said display cell.

29. The plasma display device according to claim 26, wherein said electrode drive circuit further comprises a power recovery switch connected via a coil to said electrode configuring said display cell.

30. The plasma display device according to claim 29, wherein said positive potential represents a voltage which equals to a half of said sustain discharge voltage above the ground level, and said negative potential represents a voltage which equals to a half of said sustain discharge voltage below the ground level.

31. The plasma display device according to claim 30, wherein one terminal of said power recovery switch is connected via said coil to said electrode configuring said display cell, and the other terminal is connected to a ground terminal.

32. The plasma display device according to claim 13, wherein a reset voltage for initializing said display cell is superposed to the reference voltage of said lower-potential-side switching circuit during a period that said reset voltage is supplied to said electrode configuring said display cell.

33. The plasma display device according to claim 32, wherein said electrode drive circuit further comprises a power recovery circuit connected via a coil to said electrode configuring said display cell.

34. The plasma display device according to claim 33, wherein one terminal of said power recovery switch is

connected via a coil to said electrode configuring said display cell, and

a voltage synchronized with said reset voltage for initializing said display cell is superposed to the other terminal of said power recovery switch during a period that said reset voltage is supplied to said electrode configuring said display cell.